SYSTEM AND METHOD FOR MODIFYING PEAK-TO-AVERAGE POWER RATIO IN CDMA TRANSMITTERS

ABSTRACT OF THE DISCLOSURE

A CDMA transmitter that limits the peak-to-average ratio to a selected maximum level. The CDMA transmitter comprises: 1) a first baseband combiner for receiving N baseband chip streams, each of the N baseband chip streams comprising a sequence of chips, each chip having one of a positive amplitude value and a negative amplitude value, wherein the first baseband combiner combines chips from corresponding time slots in each of the N baseband chip streams to thereby generate a first composite baseband chip sequence; 2) a data processor for detecting a first peak amplitude in the first composite baseband chip sequence that exceeds a pre-determined maximum threshold and determining an amplitude and a polarity of a first compensation pulse associated with the first peak amplitude; and 3) a pulse generator for generating the first compensation pulse having the amplitude and the polarity determined by the data processor. The first baseband combiner then combines the first compensation pulse with the first composite baseband chip sequence during a chip time slot corresponding to the first peak amplitude.